

Impact of routine hysteroscopy prior to intrauterine insemination on pregnancy rates (PR) in infertile couples at Al-Amal hospital, Misurata, Libya

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HS is an accurate tool for management of intrauterine pathology (IUP) because it detects multiple and subtle uterine lesions, and enabling treatment at an equivalent setting. Intrauterine insemination (IUI) is an efficient treatment of low complications rate, to be offered before starting more ART invasive options. As IUP can negatively affect implantation, this study investigated the routine use of hysteroscopy (HS) prior IUI in management of infertile women with the most outcome measure studied was conception / PR. Materials & Methods: Referred 180 patients (with primary and secondary infertility, 129 & 51 women respectively), ages: 23-38 years, similar BMI and candidate for (COH) with clomid & gonadotropin in conjunction with IUI cycles were included during a prospective controlled study for 2 years (April 2015 to March 2017). All underwent day 3 hormonal evaluation, divided equally & randomly into 2 groups (gps): (A) underwent diagnostic HS to rule out IUP and (if found) operated by means of a 5.5 mm Olympus continuous flow HS before IUI which has got to be performed the subsequent cycle if normal or 3 cycles after operation, (B) as an impact (IUI without HS).

Semen samples collected after 5 days of sexual abstinence & prepared by swim up technique. IUI performed with a volume of 0.5ml. Luteal support altogether patients by oral dydrogesterone for two weeks. Clinical PR : +ve bioassay and GS visualized by TVS 4 weeks after IUI, and compared between the 2 gps. Any complications were recorded. Statistical analysis performed using SPSS packages for Windows. P-value significant if (< 0.05).

Total patients lost in follow up: 27(15%): 19(21.1%) from control gp leaving 71(78.88%), and 8(8.88%) from study gp, leaving 82(91.1%). HS revealed no IUP in 53(58.88%) from study gp, while 37(41.11%) were with abnormalities: 14(15.55%) mild adhesions, 8(8.88%) small endometrial polyps, 6(6.66%)small submucosal myomas, 4(4.44%)uterine septum, 3(3.33%) endocervical lesions, 2(2.22%) chronic non-specific endometritis, (more abnormalities in women aged ≥ 30 years and people with secondary infertility). Relation

between pregnancy and sort of pathology not significant ($P > 0.623$). No statistical difference in characteristics between both gps regarding age, cause, type or duration of infertility. Overall clinical PR in both gps after IUI was statistically significant ($P < 0.05$): 38 out of 82(46.34%) in study gp, and 18 from 71(25.35%) within the control. All pregnancies in study gp occurred within first 2 IUI cycles. Pregnancies on top of things gp were as follows: (11%) 1st cycle, (34.4%) 2nd cycle, (42.5%)3rd cycle and (12%) 4th cycle. No significant reactions or surgical complications were recorded. Conclusions: HS before IUI is an efficient and safe procedure in management of any IUP, it improves significantly the probabilities of conception in infertile women before proceeding to more sophisticated and expensive treatment options.

In the past few decades many artificial reproductive techniques are invented raising the hopes of infertile couples. However, still many patients have remained without success even with these procedures. it's been known that the uterine factor plays a few 15 – 20% role in contributing to female infertility. Hence, ruling out any evidence of any intrauterine pathology by hysteroscopy becomes a crucial step before subjecting the patient to any of the assisted reproductive techniques (ART).

With the invention of miniature hysteroscopes, it's possible to perform hysteroscopy in an office setup, with or without local anaesthesia , for diagnostic and certain therapeutic interventions.

In the present study, we've evaluated intrauterine pathologies with hysteroscopy and in vitro fertilization-embryo transfer (IVF-ET) outcome in patients with unexplained previous IVF cycle failures, after excluding all other possible etiological factors.

All women in whom hysteroscopy was done were informed about the technique and therefore the potential risks within the sort of a written consent. the chosen women underwent the procedure of hysteroscopy under general anaesthesia within the position.

A rigid hysteroscope was put into the cavity under visual control after cervical dilatation of 5 to nine millimeters; normal saline was used because the distension medium, keeping the uterine pressure between 100 and 150 mm of mercury.

Intrauterine lesions, such as, synechiae, polyps, submucosal myomas, septae, and so on, were treated with scissors and resectoscope. Every hysteroscopy was followed by endometrial biopsy or curettage, and therefore the material obtained was sent for histopathological examination.

Despite advances within the field of artificial reproductive techniques over the past 20 years, implantation rates per embryo transferred still remain low, at about 15 to twenty .[2] the 2 key factors in question for this problem are the standard of the embryo and therefore the receptivity of the uterus. Although it's possible to assess the embryo quality by microscopy, uterine receptivity can't be fully evaluated. Some uterine factors which will be measured by transvaginal sonography are endometrial thickness, pattern, and blood flow within the uterine and subendometrial arteries.

Structural abnormalities of the uterine endometrial cavity may affect the reproductive outcome adversely, by interfering with the implantation and causing miscarriage . These abnormalities can have a negative effect on pregnancy in these women. The incidence of uterine abnormalities in patients undergoing hysteroscopy has been reported to be between 19 and 50%.

Different hypotheses are suggested to define the mechanism of infertility thanks to intrauterine pathologies. Polyps may cause infertility by virtue of their location, thereby causing mechanical block (e.g., tubocornual polyp) by their association with endometriosis, or by expression of the enzyme aromatase. Myomas that protrude into the cavity may decrease vascular supply to the trophoblastic tissue when implantation takes place on the overlying endometrium. Most septa are relatively avascular and hence end in implantation failure when implantation takes place over them. Other pathologies like synechiae, endometritis, cervical stenosis, and chronic cervicitis are often causes of subfertility.

The place of routine hysteroscopy within the management of infertile women without other diagnosed or doubtful intrauterine pathologies remains a matter of debate. the 2 main problems that argue against the case of hysteroscopy are: first, it's an invasive procedure, and second, there's still an ongoing debate about the important significance of the observed intrauterine pathology on fertility. Currently, the ecu Society of Human Reproduction and Embryology (ESHRE) guidelines indicate hysteroscopy to be unnecessary, unless it's for the confirmation and treatment of doubtful intrauterine pathology. Nevertheless, during a study by Shoker et al. , it had been suggested that 26% of the patients with normal hysterosalpingography were with abnormal hysteroscopic findings.

The impact of polyps on infertility is especially hooked in to their size and site . A prospective randomized study of the impact of polyps on an IVF program, by Lass et al. concluded that tiny endometrial polyps (less than two centimeters) don't decrease the pregnancy rate after IVF, but a trend toward increased pregnancy loss exists.

The available data on the role of submucous myomas in infertility and therefore the impact of hysteroscopic myomectomy on pregnancy outcome shows encouraging results. Authors have reported clinical pregnancy rates starting from 31% to 77% post myomectomy. Women who had myomectomies for myomas quite two centimeters had significantly higher pregnancy and birth rates than women in whom myomectomy wasn't done. Hysteroscopic resection is claimed to be the gold standard for the treatment of submucous or intracavitary myomas. The role of hysteroscopic septum resection in patients with septate uterus has also been studied extensively. A meta analysis of retrospective data comparing pregnancy outcome before and after hysteroscopic septoplasty indicated a marked improvement after surgery, in increasing the pregnancy rate and decreasing the miscarriage rate.

Several studies have also been performed to seek out if hysteroscopic treatment of intrauterine pathologies increases the success of IVF-ET. Kirsop et al. , suggested that intrauterine abnormalities could also be a cause for failure of IVF-ET or Gamete Intrafallopian Transfer (GIFT) and thus hysteroscopy should be a part of the infertility workup for all patients, before undergoing IVF treatment.

Faghali et al. , have also recommended screening the uterus by hysteroscopy before proceeding with IVF, to attenuate implantation failures. The role of hysteroscopy in patients with previously failed IVF cycles has also been studied. A recent systematic review and meta analysis of two randomized and three non-randomized control trials on 1691 patients concluded that hysteroscopy before a subsequent IVF attempt significantly increases the chances for conception in patients with a minimum of two failed IVF attempts.

Depending upon the diagnosis and therefore the procedure done, the ladies were either stimulated immediately or after some period for IVF/ICSI cycle. the ladies were downregulated with pill pills and Gonadotropin-releasing hormone (GnRH) analogues. Injection HMG(Human Menopausal Gonadotrophin) was started from the second day of menses and simultaneous follicular monitoring was done from the sixth day.

Injection HCG (Human Chorionic Gonadotrophin) was given when a minimum of three leading follicles were 16–18 mm size. Thirty-six hours later oocyte retrieval was performed followed by IVF/ICSI, then the embryo transfer.

Conclusion: The role of hysteroscopy in patients undergoing IVF seems to be vital for patients in whom an IVF is being contemplated, for treatment of infertility. Intrauterine pathologies and structural uterine abnormalities which will be liable for the failure of IVF are often detected and treated, leading to improved pregnancy rates. this is able to also save the patient additional costs of IVF cycles, where failures occur because the intrauterine pathology is missed on other screening investigations like hysterosalpingography. this is often very true in women with one or more prior failed IVF cycles.